

DPP4 1 M K T P W K V U L L G I L C . . . A A P L V T
DPRP1 1 M A A A M E T E Q L G V E I F E T A D C E E N I E S Q D R P K I E P F Y V E R Y S W S O L K K L L A D I T R K Y H G Y M M
DPRP2 1 M A T T G T P T A D R G D A A A T D D P A A R F Q V Q K H S W D G L R S I I H G S R K Y S G L I V
DPRP3 1 M N Q T A S V S H H I K C O P S K T I K E L G S N S P P Q R N W K G T A I A L L V I L V V C S

DPP4 20 I I T V P V V L L N K G T D D A T A D S R K T Y T L D . . . Y L K N . . . T Y R L K L Y S T I R W I S D H E Y I M K Q E N
DPRP1 61 A K A P H D E M F V K R N D P D G P H S D R H Y Y L A M S G E N R E N I L F Y S I P K T I N R A A V L M L S W K P L L
DPRP2 50 N K A P H D E Q F V Q K T D E S G P H S H R I Y Y L C M P Y G S R E N S L L Y S I P K K V R K E A L L L S W K O M L
DPRP3 48 L I T M S V I L L S P . . . D E L T N S S E T R L S L E D . . . L E R K D . . . F V L H D . P E A R W I N D T D V V Y K S E N

DPP4 75 . N I L V F N A E Y G N S S . . . M F L E N S T F D E F G H S I N D Y S T I S P D G Q F I L L E Y N Y V K O W R H S Y T
DPRP1 121 . D I F Q A T L D Y G M Y S R E E E L L R E R K R I G T V G I A S Y D Y H Q G . S G T F L F Q A G G S I Y H V K D G G P
DPRP2 110 . D H F Q A T P H H G M Y S R E E E L L R E R K R I C V F G I T S Y D F H S E . S G L E L F Q A S N S L E H C R D G G K
DPRP3 101 G H V I K L N I E T N A T T . . . L L E I N T T E V T E . . . K A S R H S V S P D L K Y V I L L A Y E V K Q I E H Y S Y T

DPP4 130 A S Y D I Y D L N K . . . R Q L I T E E R I P N N T O W V T W S P V G H K L A Y V V W N N D I M V K I E P N L P S Y R Q T
DPRP1 179 Q G F T Q Q P L R P . . . N L V E T S C P N I R . M D P K L C P A D P D W I A F I H S N D I W I S N I M T R E E R R L T
DPRP2 168 N G F M V S P M K P . . . L E I I K T Q C S G P R . M D P K I C P A D P A F E S F I N N S D E W V A N I E T G E E R R L T
DPRP3 155 A S Y V I Y N I H T R E V W E I N P P E V E D S V I Q Y A A W G V Q G Q Q L I M I F E N N I Y Y Q P D I K S S S L R L T

DPP4 187 W T G K E D I I Y N C I T D W V Y E E E V F S A Y S A L W W S P N C T E L A Y A . . Q F N D T E V P
DPRP1 235 Y V H N E L A N M E E D A R S A G V A T E V L Q E E F D R Y S G Y W W C P K A E T T P S . G G K I L R I L Y E E N D E S
DPRP2 224 F C H O G L S N V L D D P K S A G V A T E V I Q E E F D R F T G Y W W C P T A S W E G S E G L K T L R I L Y E E V D E S
DPRP3 215 S S G K E E I I F N G I A D W L Y E E L L H S H I A H W W S P D C E R L A F E M I N D S L V P

DPP4 235 L I E Y S F Y S D E S L Q Y P K T V R V P Y P K A G A V N P . . . T K F E V V N T D S L S S V T N A T S I O T A P A S
DPRP1 294 E V E I I H V T S P M L E T R A D S E R Y P K T G T A N P K M T E K M S E I M D A E G R I I D V D I V D K E L I Q P F E
DPRP2 284 E V E M I H V P S P A L E E R K T D S Y R Y P R T G S K N P K I A I K L A E E C T D S Q G K I V S T Q E K E L M Q P F S
DPRP3 263 T M V I P R F T G A L Y P . . . K G K Q Y P Y P K A G Q V N P . . . T K K L Y V V N L Y G P T H T L E L M P P D S

DPP4 293 M L I G . D H Y L C D V T W A N Q . E R I S L Q W L R R I Q N
DPRP1 354 I I L F E G V E Y I A R A G W T P E G K Y A W S I L L D R S Q T R L Q I V L I S P E L F I P V E D D V M E R Q R L I E S V
DPRP2 344 S L E P K V E Y I A R A G W T R D G K Y A W A M E L D R P Q Q W L Q I V L I P P A L F I B S T E N E E Q R L A S A R A V
DPRP3 314 F K S R . E Y Y I I T M V K W V S N . T K T V V R W L N R P Q N

DPP4 322 . Y S V M D I C D Y D E S S G R W N C I V A R Q H I E M S I T G W V G R F R P S E P H F T L D G N S F Y K I I S N E . .
DPRP1 414 P D S V T P I L I I Y E E T T D I W I N T H D I F H V W F P Q S . H E E E I E F T I F A S E C K T G F R H L Y K I T S I L K E
DPRP2 404 P R N V Q P Y V V Y E E V T N M W I N M H D I F Y P F P O S E G E D E L C F I R A N E C K T G F C H L Y K M T A V L K S
DPRP3 343 . I S I I T V C E T T G A C S K K Y E M T S D T W L S Q Q N E . E P V F S R D G S K F F M T V P V K Q G

FIG. 1A

DPP4 379 E.....GYRHICYFQIDK.....DCTFITKGTVWEVIG....IEAITSDYLYYISNEYK
 DPRP1 473 SKYKRSSGGLPAPSDFKCPIK.....EEIAITSGEWEVIGRHGSNIQVDEVRRLVYFEGTK
 DPRP2 464 QGYDWSEPFSPGEDEFKCPIK.....EEIAITSGEWEVIGRHGSKIWVNEETKLVYFGTKE
 DPRP3 394 GR.....GEFHIIAMFLIQSKSEQITVRHETSGNWEVIK....IAYDETTQKIFYELSTE

DPP4 424 GMPGGRNLKYKIQSLDYTKVTCLSCELNPERCQYYSVSFSKEAKYVOLRCSGPGLPFIYTLH
 DPRP1 529 DSPLERHHLYVVSYVNPGEVTRLTDRGYSHSCCISQHCDFFHSKYSNOKNP. HCVSEYKLS
 DPRP2 520 DPLEHHLYVVSYEAGEFVRLTTPGESHSCMSQNFDMEWSHYSSVSTP. PCVHMYKLS
 DPRP3 445 SSPRGRQLYSASTEGLLNROCESCNFMKEQCYFDASESPMNQHFLLFCCEGPRVEVSLH

DPP4 484 SSVNDKGRLVLEDNSALDKMLQN..VQMPSKKLDFTILNETKFWYQOMILPPHFDKSKKYP
 DPRP1 588 SPEDDPPTCKTKEFWATILDAGPLPDYTPPEIIFESTTGETLYGMLYKPHDLQPGKKYP
 DPRP2 579 GPDDDDPLHKOPRFWASMMEAASCPPDYMPPPEIIFHRSDRVRLYGMQYKPHALQPGKKHP
 DPRP3 505 STDNPACYFTLESNSMLKEAILKKKIGKP..EIKILEHTDDYELPLQLSLPKDFMDRNQYA

DPP4 542 LLLDVYAGPCSQKAATVFR..LNWATYLASTENITVASEDGRGSGSYQGDKIMHAINRRIG
 DPRP1 648 TVLFYVGPGQVQLVNNRFKGWVKYERLNTLASLGYMVVVIDNRGSCHRGLKFEGAEKYKMG
 DPRP2 639 TVLFVYVGPGQVQLVNNSFKGTKYLRNLTLASLGYAVVVIDGRGSCQORGKRFEGALKNOMG
 DPRP3 563 LLLIMDEEPGGQLVTDREH..IDWDSVLIDMDNVIIVAREDGRGSGEQQLKILQEIRRREG

DPP4 600 TFEEDQDEPAPRQFS.KMGFMDNKRTAIWGWSYGGYVTSMLVLSGSGVFKCGIAVAPVSR
 DPRP1 708 QFEEDQDEQEVQQLASRKYDFIDLDdrvG1HGWSYGGYLSLMQRSDFRVAIAGAPVTL
 DPRP2 699 QVEEDQDEQEVQQLASRKYDFIDLSRAVIAHGWSYGGELSLMGLTHKPOVFKVALAGAPVTY
 DPRP3 621 SVEVKDQITAVKFLKLPLYIDSKRIS1EGKGYGGYIASMILKSDEKTFKCCSVVAPITD

DPP4 659 WEMYDSVYTERYMGLPTPEDNLDHYRNSTVMSRAENFKOVEYLITHGTADENVHFOQSAQ
 DPRP1 768 WTYDGYTERYMGHPDONEQGGYLGGSVAMQAEEFPSEPNRLLEIHGFIDENVHFAHESI
 DPRP2 759 WMAYDGYTERYMDWPENNCHGYEAGSVALHVEKLPNEPNRLLEIHGFIDENVHFEHENF
 DPRP3 680 LKLYASAFTGMPSEE..TYQAAASVHNVHGLKEENILETHGTADETKVHFOQSAE

DPP4 719 ISKALVDGVVDEQAMWYTDEDHGIASSTAHQHIYTHMSHFIKQGFSLP.....
 DPRP1 828 LESELWRAKGPKYDLQTYPQERHSIRVPESGEHYELHLLHQLQENLGSRIAALKVI.....
 DPRP2 819 LVSQDTTRAGKPYQLOTPNPERHSIRCPESEHYEVTLLEHFQEYL.....
 DPRP3 738 LEKHLLKAGVNNTMOMYPDEGHNVSEK.SKYHLYSTELKFFSECLKEEISVLPQEPEEDE

FIG. 1B

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Title: NOVEL SERINE PROTEASE GENES RELATED TO DPPIV
Inventors: Steve Qi et al.
Attorney Docket No. 70669

hDPRP1	1	MAAAAMETEQLGVEIFETA[RE]CEEN. IESQDRPKLEPFYVERYSQLKLLADTRKYHGYM
mDPRP1	1	MAAAAMETEQLGVEIFETA[RE]CEEGNGESQDRPKLEPFYVERYSQLKLLADTRKYHGYM
hDPRP1	60	MAKAPHDFMFVKRNNDPDGPHSDR[RE]YYLAMSGENRENTLFYSEIPKTINRAAVLMLSWKPL
mDPRP1	61	MAKAPHDFMFVKRTDPDPRPHSDR[RE]YYLAMSGENRENTLFYSEIPKTINRAAVLMLSWKPL
hDPRP1	120	LDLFQATLDYGMYSREEELLRERKRIGTVGIA[RE]SYDYHQGSGLFLQAGSGIYH[KDGGPQ
mDPRP1	121	LDLFQATLDYGMYSREEELLRERKRIGTVGIA[RE]YDYHPGSGLFLQAGSGIYH[KDGGPH
hDPRP1	180	GFTQQPLRPNLVETSCPNIRMDPKLCPADPDWIAFIHSNDIWI[RE]VTREERR[RE]TYVHNE
mDPRP1	181	GFTQQPLRPNLVETSCPNIRMDPKLCPADPDWIAFIHSNDIWI[RE]VTREERR[RE]TYVHNE
hDPRP1	240	LANMEEDARSAGVATFVLQEEFDYSGYWWC[RE]KAETTPSGGKILRILYEENDESEVEIIH
mDPRP1	241	LANMEEDPRSAGVATFVLQEEFDYSGYWWC[RE]QAERTPSGGKILRILYEENDESEVEIIH
hDPRP1	300	VTSPMLETRRADSFRYPKTGTANPKVTFKMSEIMI[RE]DAEGRIIDVIDKEL[RE]QPFEILFEGV
mDPRP1	301	VTSPMLETRRADSFRYPKTGTANPKVTFKMSEIVV[RE]DAAGGIIDVIDKEL[RE]QPFEILFEGV
hDPRP1	360	EYIARAGWTPEGKYAWSILLDRSQTHLQIVLISPELFIPVEDDV[RE]ERQRILIESVPDSVTP
mDPRP1	361	EYIARAGWTPEGKHAWSILLDRSQTHLQIVLISPELFIPVEDDAM[RE]RQRILIESVPDSVTP
hDPRP1	420	LIIYEETTDIWINIHDIHVFPQ[RE]HEDEIEIFIFASECKTGRHLKITSILKESKYKRSS
mDPRP1	421	LIIYEETTDIWINIHDIHVFPQ[RE]HEDEIEIFIFASECKTGRHLKITSILKESKYKRSS
hDPRP1	480	GGLPAPSDFKCPIKEEIAITSGEWEVLGRHGSNIQVDEV[RE]LVYFEGTKDSPLEHHLYVV
mDPRP1	481	GGLPAPSDFKCPIKEEITITSGEWEVLGRHGSNIWVDE[RE]LVYFEGTKDSPLEHHLYVT
hDPRP1	540	SYVNPGEVTRLTDRGYSHSCC[RE]SOHCDF[RE]ISKYSNQKNPHCVSLYKLSSPEDDPTCKTKE
mDPRP1	541	SYANPGEVVRLTDRGYSHSCC[RE]SRHCDF[RE]ISKYSNQKNPHCVSLYKLSSPEDDPVHKTKE
hDPRP1	600	FWATILDGPLPDYTPPEIFS FESTTGFTLYGMLYKPHDLQPGKKYPTVLFYGGPQVQ
mDPRP1	601	FWATILDGPLPDYTPPEIFS FESTTGFTLYGMLYKPHDLQPGKKYPTVLFYGGPQVQ
hDPRP1	660	LVNNRFKGVKYFRLNTLASLGYVVVVIDNRGSCHRGLKFEGAFKYKMGQIEIDDQVEGLQ
mDPRP1	661	LVNNRFKGVKYFRLNTLASLGYVVVVIDNRGSCHRGLKFEGAFKYKMGQIEIDDQVEGLQ
hDPRP1	720	YLASRYDFIDLDRVGIGHWSYGGYLSLMALMQRSDFRVAIAGAPVTLWIFYDTGYTERY
mDPRP1	721	YLASQYDFIDLDRVGIGHWSYGGYLSLMALMQRSDFRVAIAGAPVTLWIFYDTGYTERY
hDPRP1	780	MGHPDQNEQGYYLGSVAMQAEKFPSEPNRLLLLHGFLDENVHFAHTSILLSFLVRAGKPY
mDPRP1	781	MGHPDQNEQGYYLGSVAMQAEKFPSEPNRLLLLHGFLDENVHFAHTSILLSFLVRAGKPY
hDPRP1	840	DLQIYPQERHSIRVPESGEHYELHLLHLYQENLGSRIAALKVI
mDPRP1	841	DLQIYPQERHSIRVPESGEHYELHLLHLYQENLGSRIAALKVI

FIG. 2

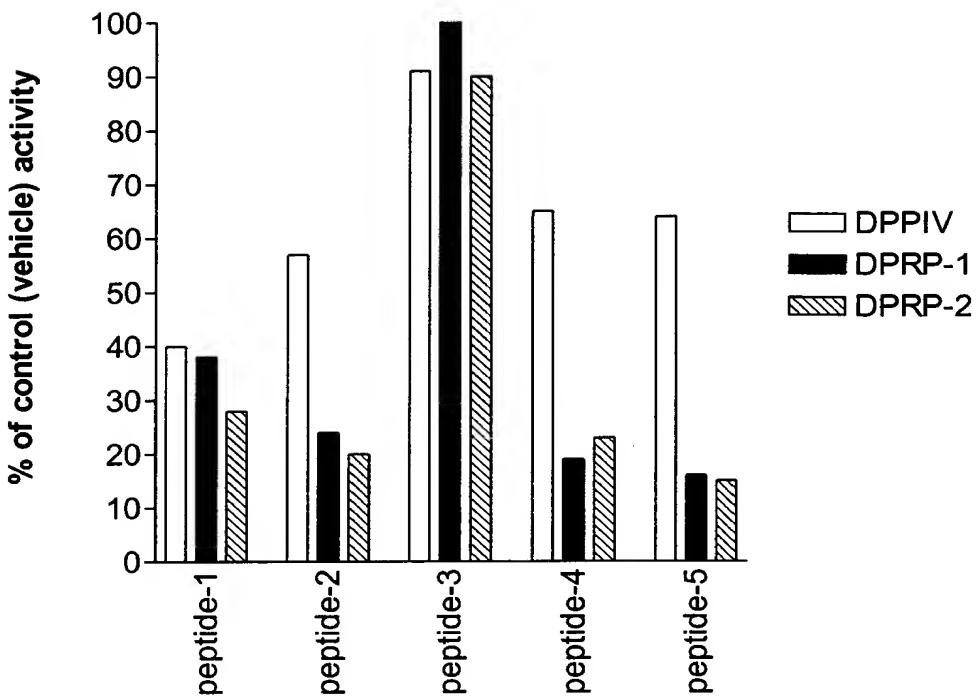


FIG. 3

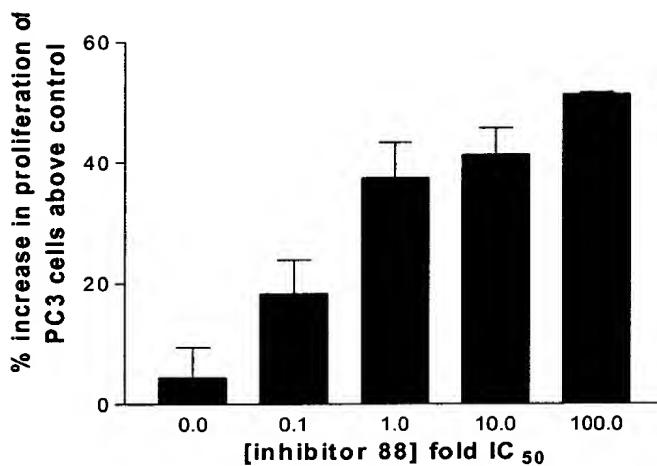


FIG. 4A

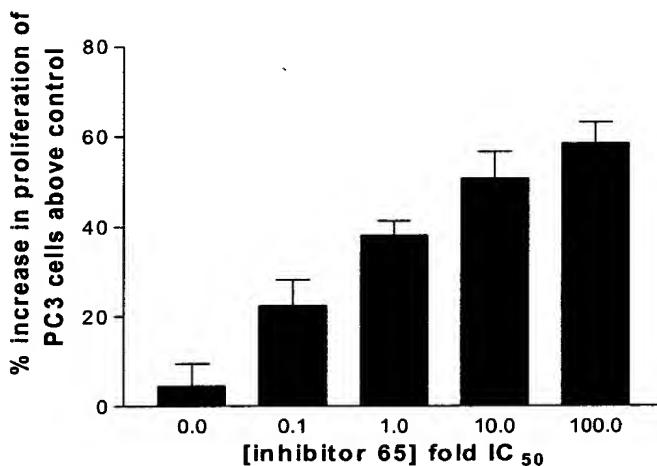


FIG. 4B

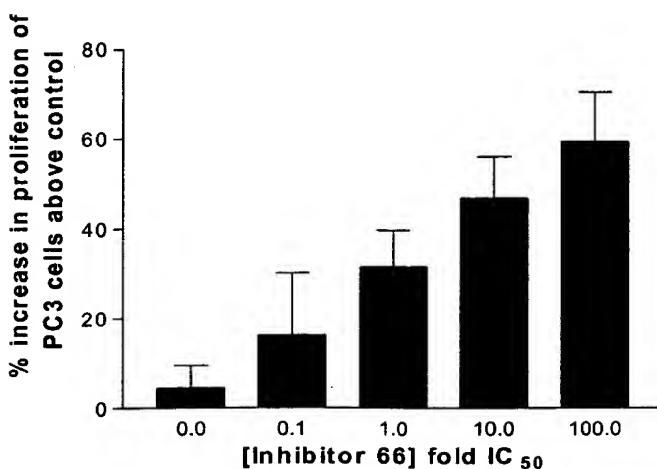


FIG. 4C